



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,979	02/10/2004	Linfang Zhu	226083	1294

23460 7590 04/19/2006

LEYDIG VOIT & MAYER, LTD
TWO PRUDENTIAL PLAZA, SUITE 4900
180 NORTH STETSON AVENUE
CHICAGO, IL 60601-6780

EXAMINER

FAISON, VERONICA F

ART UNIT	PAPER NUMBER
----------	--------------

1755

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/775,979	ZHU ET AL.	
	Examiner	Art Unit	
	Veronica F. Faison	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 7-9, 12-17 and 19-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 7-9, 12-17, and 19-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claims 2-4, 12, 14-17, 22 have been amended, claims 28-30 have been added and claims 1, 5, 6, 10, 11, 18 have been canceled. Hence, claims 2-4, 7-9, 12-17, and 19-30 are pending in the application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2-4, 7-9, 12-17 and 19-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The subject matter that is not supported by the specification is "free of an epoxy resin".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1755

Claims 2-4, 7-9, 12, 13, 15 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatia et al (US Patent 4,567,213) in view of Zou et al (US Patent 6,726,756).

Bhatia et al teach an ink composition comprising a resin component i.e. styrene-acrylic acid binder, a soluble dye, a solvent system that may include lower aliphatic ketone and an evaporation retardant (abstract and col. 1 lines 29-51). The composition may also comprise modifiers such as rosin oil or rosin esters in the amount of 0 to 15 percent by weight (col. 3 lines 6-11). The ketone is present in the amount of 10 to 60 percent by weight and may be acetone or methyl ethyl ketone (col. 3 lines 21-30). The evaporation retardant is present in the amount up to 50 percent by weight (col. 3 lines 57-59). The ink has properties of the following viscosity in the range of 1 to 10 cp, resistivity in the range of 10 to 3000 ohm-cm and sonic velocity of 1100 to 1400 m/sec (col. 4 lines 12-20).

Zou et al teach an ink jet ink composition comprising a liquid vehicle, one or more binder resin, a colorant and optionally a surfactant (abstract and col. 2 lines 63-67). The reference further teaches that the binder resin may be ketone resin, aldehyde resin, cellulose resins, acrylic resins, phenolic resins, rosin resin and vinyl resins (col. 3 lines 46-53).

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have replaced vinyl resin with ketone resin, aldehyde resin, cellulose resins, acrylic resins, phenolic resins, rosin resin

Art Unit: 1755

because the substitution of art recognized equivalents as shown by Zou et al would have been within the level of ordinary skill in the art.

Claims 2-4, 10, 12, 14-17, 19-22, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Airey et al (US Patent 5,407,474) in view of Zou et al (US Patent 6,726,756).

Airey et al teach an pigmented ink composition that may be used in ink jet printing having properties including the viscosity in the range 1 to 100 mPas, conductivity in the range 150 to 16000 μ mhos/cm, and a surface tension of 20 to 70 dynes/cm (abstract and col. 2 lines 21-42). The reference teaches that the medium for the composition is a polar solvent that may be water, methyl ethyl ketone, alcohol or a mixture thereof (col. 3 lines 13-15) in an amount greater than 15 percent by weight. The binder may comprise on or more resins such as rosins, esterified resins, acrylic, and styrene acrylic (col. 3 lines 38-41). The composition may comprise additional components including surfactants, humectants, biocides, defoaming agents, penetrants and buffering agents (col. 4 lines 30-55).

Airey et al fails to specifically exemplify the use of methyl ethyl ketone and the specific resins as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the methyl ethyl ketone and the specific resins as claimed by applicant as Airey et al also discloses the use of methyl ethyl ketone and the specific resins but shows no example incorporating them.

Claims 2, 3, 7, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-098203.

Art Unit: 1755

JP 05-098203 teaches an ink composition comprising an oil color, resin and an organic solvent (claim 1 and para. 0003). The reference further teaches that the resin may be a combination of epoxy resin, acrylic resin, silicone resin, phenol resin, salt vinyl acetate system resin, and rosin ester (para. 0011). The colorant present in the composition may be a dye in the amount of 1 to 15 percent by weight (para. 0012). The solvent present may be selected from ketones such as methyl ethyl ketone and acetone (0013).

JP 05-098203 fails to specifically exemplify the use of methyl ethyl ketone and the specific resins as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the methyl ethyl ketone and the specific resins as claimed by applicant as JP 05-098203 also discloses the use of methyl ethyl ketone and the specific resins but shows no example incorporating them.

Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatia et al (US Patent 4,567,213) in view of Zou et al (US Patent 6,726,756).

Bhatia et al and Zou et al are described above, but fails to teach the substrate set forth in claims 23-27.

Therefore it would have been obvious to one of ordinary skill in the art to use the ink composition taught by Bhatia et al because Bhatia teaches printing on substrate that are not paper.

Response to Arguments

Art Unit: 1755

Applicant's arguments with respect to claims 1-4 and 7-27 have been considered but are moot in view of the new ground(s) of rejection in regards to the vinyl resin amendment.

Applicant's arguments filed 1-4-06 have been fully considered but they are not persuasive. Applicant argues that the references are not free of an epoxy resin, however "free of an epoxy resin" is considered new matter and therefore because the arguments are based on subject matter not supported by the specification the rejections with respect to claims that contain "free of epoxy resin" have been maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1755

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VFF
4-17-06


J.A. LORENZO
SUPERVISORY PATENT EXAMINER